### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



## . | COLIC AND COLOR C

# (43) International Publication Date 3 June 2004 (03.06.2004)

PCT

# (10) International Publication Number WO 2004/046692 A3

(51) International Patent Classification<sup>7</sup>: 27/00

G01N 17/00,

(21) International Application Number:

PCT/US2003/037251

(22) International Filing Date:

18 November 2003 (18.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/427,136

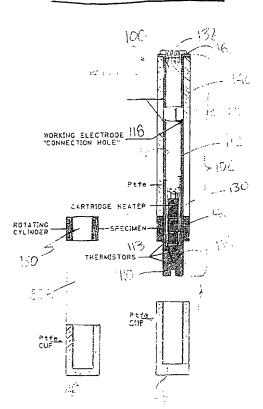
18 November 2002 (18.11.2002) U

(71) Applicants (for all designated States except US): SAUDI ARABIAN OIL COMPANY [SA/SA]; R-3296, Administration Building, Dharhran 31311 (SA). ARAMCO SERVICES COMPANY [US/US]; 9009 West Loop South, Houston, TX 77096 (US).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): JARALLA, Abdulghanl [NZ/SA]; Abqaiq Aramco Camp, N-Block 203L, Abqaiq 31311 (SA).
- (74) Agent: SPATH, Thomas, E.; Abelman, Frayne & Schwab, 150 East 42nd Street, New York, NY 10017-5612 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

#### (54) Title: CORROSION TESTING APPARATUS



(57) Abstract: A rotational test electrode assembly for use in a corrosive fluid environment as shown in figure I that includes a generally cylindrical heat and electrically conductive member (110) having an annular portion (112) and a solid portion (114): a heating device (130) positioned inside of the annular portion and in heat exchanging relation with the solid portion of the conductive member; a corrosion resistant external protective member (140) that surrounds a portion of the heat conductive member in close-fitting relationship; mounting means for attaching a rotational electrode (150) in close fitting heat and electrically conductive relation, the electrode being selected from the group consisting of cylindrical and disk electrodes; and an electrical connector for rocciving a plurality of external electrical connectors that is mounted on the protective member opposite the portion of the conductive member on which the rotational electrode is mounted.

## WO 2004/046692 A3



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

### Published:

- with international search report
- (88) Date of publication of the international search report:

12 August 2004